

**Combustion Byproducts Recycling Consortium**  
**Quarterly Status Report**

*for*

**July - September, 2007**

**Cooperative Agreement Number DE-FC26-98FT40028**

*Submitted to*

**U.S. Department of Energy – National Energy Technology Laboratory**

*Submitted by*

**Tamara Vandivort, Consortium Manager  
CBRC National Center  
West Virginia University**

**October 24, 2007**

## CBRC National Center Report

### No-cost Extension

A requested no-cost extension was received this quarter to extend the cooperative agreement between WVU and DOE through August 31, 2008. The purpose of this is to ensure there is no gap in time between the current agreement (which expired August 31, 2007) and the modification to the project workplans and budgets. Such a “gap” would cause accounts to freeze and payments of invoices to be delayed.

### Revisions to Active Project Workplans

This quarter, all 2005 project researchers submitted revised statements of work, budgets, and timelines to reflect the reduction in funding. In all cases, researchers received at least 75% of the value of year 1 funding from the DOE/CBRC program and were asked to bring their projects to a logical conclusion. The following table shows original year 1 allocations and subsequent reallocations. As soon as DOE-NETL approves the budget modification, all active subcontracts will be amended to reflect the reduced scope of work, revised budget, and adjusted timeline. The projects will be extended through June 30, 2007; the regional centers through July 31, 2007. This will allow the regional centers one month to review project final reports; and allow the national center one month to review regional center reports prior to expiration of the cooperative agreement between WVU and DOE-NETL.

Number	Title	PI	Original Year 1 Funding	Revised Year 1 Funding
05-CBRC-E08	National Network of Research and Demonstration Sites for Agricultural and Other Land Application Uses of FGD Products	Dick	\$116,338.00	<b>\$105,000.00</b>
05-CBRC-E18	Field Testing of Arsenic and Mercury Bioavailability Model from Land-Applied CCBs	Pier	\$23,530.00	<b>\$17,648.00</b>
05-CBRC-E19	Community-based Social Marketing: the tool to get target audiences to use CCBs	Buggeln	\$53,915.00	<b>\$40,436.00</b>
05-CBRC-M09	Cold In-Place Recycling of Asphalt Pavements Using Self-Cementing Fly Ash: Analysis of Pavement Performance and Structure Number	Misra	\$24,987.00	<b>\$18,740.00</b>
05-CBRC-M16	In Situ Stabilization of Gravel Roads with CCPs	Edil	\$65,180.00	<b>\$48,885.00</b>

05-CBRC-M20	New Technology Based Approach to Advance Higher Volume Fly ash Concrete with Acceptable Performance	Obla	\$132,502.00	<b>\$113,974.00</b>
05-CBRC-M23	Manufacturing building products with fly ash and advanced coal combustion byproducts	Chou	\$51,000.00	<b>\$38,250.00</b>
05-CBRC-W03	Evaluation of CCBs for In Situ Treatment of Acid Mine Drainage	Canty	\$13,645.69	<b>\$11,610.00</b>
05-CBRC-W04	Using Class C Fly Ash to Mitigate Alkali-Silica Reactions in Concrete	Dockter	\$50,000.00	<b>\$37,500.00</b>
05-CBRC-W08	Evaluation of the Durability and Commercial Potential of 100 Percent Fly Ash Concrete	Stephens	\$71,634.00	<b>\$71,634.00</b>

## Researcher Quarterly Reports

Until the modification is approved by DOE-NETL, research projects are on hold. We anticipate the modification to be approved next quarter at which time researchers will be notified to resume work with the revised statements of work, budgets, and time lines.

## Final Reports

No final reports were received this quarter.

## Outreach Activities

### ***Program Promotion***

#### Promotional Fact Sheet

A promotional fact sheet on the CBRC program is was completed. Input from the National Center, Regional Directors, and ACAA president, Dave Goss, and NSC members were incorporated into this promotional document. Next quarter, this fact sheet along with explanatory cover letter and draft letter to congress will be disseminated to the CBRC list serve. ACAA has also volunteered to distribute the package to their membership. The purpose is to market the purpose, need, and importance of the CBRC program.

### ***Project Papers and Presentations***

#### Pittsburgh Coal Conference 2007

This year's Pittsburgh Coal Conference was held in Johannesburg, South Africa. A presentation on the *Combustion Byproducts Recycling Consortium* was given by

WVWVI research associate, Jennifer Fulton. WVWRI is offset approximately 50% of the associated travel expenses. A copy of the paper and patent clearance form was submitted to DOE-NETL. A copy was attached to last quarter's report as Appendix B.

## **Plans for Next Quarter**

### ***Outreach***

#### Promotional Fact Sheet

- Distribute program promotional package (cover letter; fact sheet; draft letter to congress) via CBRC list serve; ACAA membership; and place on CBRC web page.

#### Presentations and Papers

- No presentations or papers are planned for next quarter.

#### Quarterly newsletter, *Ashlines*

- No future issues of *Ashlines* planned.

#### Web Site

- Continue updating with upcoming events and final reports as received.

## **Regional Center Reports**

Eastern, Midwestern, and Western Center Reports are attached as Appendices B, C, and D, respectively.

# **APPENDICES**

## **Appendix A**

### **Program Promotional Package**

**Letter of Explanation**

**Fact Sheet**

**Draft Letter to Congress**

## Letter of Explanation

October 4, 2007

Dear Reader:

More than 123 million tons of solid byproducts are produced each year by coal-burning electric power plants in the U.S. Only 43% of these byproducts are currently reused or recycled. And now, a national program dedicated to promoting and supporting the commercially-viable and environmentally-sound recycling of coal combustion byproducts has had its FY08 budget zeroed out. This program, the *Combustion Byproducts Recycling Consortium (CBRC)*, funded by the U.S. Department of Energy-National Energy Technology Laboratory since 1998, develops and demonstrates technologies which address issues related to the recycling of these byproducts.

The CBRC provides seed money to researchers to develop innovative applications for coal combustion byproducts (CCB's) while ensuring their economic and environmental viability. Since its inception in 1998, the CBRC has funded 52 projects nationwide ranging from CCB usage for agricultural purposes, transportation materials, building products, and filling mine voids, to other large-scale uses. As a result, CBRC's technologies have been selected for large-scale demonstrations. Technologies have generated results that have been adopted as agency policy or adopted by industry as commercial processes.

The CBRC is funded by the U.S. Department of Energy's Office of Fossil Energy's Innovations for Existing Plants (IEP) Program. With no additional funds forthcoming, this important program will cease to exist. We ask that you **contact your State Congressional delegate(s) and ask them to vote to restore funding for the IEP Program and support the CBRC program.** A draft letter is enclosed for your convenience. Without continued support for CCB research, the majority of CCB's will continue to go unused and accumulate in America's landfills.

This initiative is supported by the American Coal Ash Association, the Interstate Mining Compact Commission, and numerous state and corporate agencies. The program is managed by the West Virginia Water Research Institute at West Virginia University with regional management by Southern Illinois University, the University of North Dakota, and the University of Kentucky. A national steering committee consisting of senior Federal, State, and industry representatives provides program direction and project selection.

Thank you for your time and effort to request support of this program from your State Congressional delegate(s). For more information on the CBRC program, for an electronic copy of the draft letter to Congress, or contact information on your State Congressional delegate(s), log onto: <http://www.wri.nrcce.wvu.edu/programs/cbrc> and click on "Support the CBRC."

Sincerely,

Paul Ziemkiewicz, Director

## **Fact Sheet**

**See attached file named “Fact Sheet”**



## **Draft Letter to Congress**

October 24, 2007

The Honorable "Name of your Congressional delegate"  
Address

Dear Mr./Ms. "Name":

Re: Innovations for Existing Power Plants Program

It has come to my attention that the Department of Energy Office of Fossil Energy's Innovations for Existing Plants (IEP) Program has been zeroed out in the President's Fiscal Year (FY) 2008 budget. In addition, the FY2007 IEP budget was reduced significantly. It is through the IEP Program that the Combustion Byproducts Recycling Consortium (CBRC) is funded. As a result of these funding cuts, no additional FY07 or FY08 funds are being allocated to the CBRC.

The mission of the CBRC is to promote and support the commercially viable and environmentally sound recycling of coal combustion byproducts (CCBs) for productive uses, through scientific research, development, and field testing. Since its inception in 1998, the CBRC has funded 52 CCB research projects nationwide with a total value exceeding \$10 million. Successful projects have included using CCBs in mine reclamation, soil remediation, road base materials, aggregates, marine structures, lagoon liners, transmission poles, and building products. The CBRC, which has operated continuously since 1998, serves as an effective vehicle for acquiring and maintaining guidance from government agencies and private-sector organizations so that the proper balance in research and development is achieved.

The byproducts element of the IEP Program keeps CCBs such as fly ash and scrubber sludge out of the waste stream by developing environmentally-friendly and economically-attractive alternative uses. Before the CBRC was implemented, only 25% of CCBs were beneficially used. That number is now over 40%. Without continued support, it is likely that increasing amounts of CCBs will be landfilled. As a consequence, our national goal to have an emissions-free plant will not be met.

I urge you to indicate your support to the House and Senate Energy and Water Subcommittees for reinstatement of DOE's IEP Program to a funding level of \$25M in FY08 and that at least \$3M of those funds be allocated to the CBRC program to develop alternative uses of coal byproducts.

Thank you for your attention to this request.

Sincerely,

"Your name here"

## **Appendix B**

### **Eastern Center Quarterly Report**

**Submitted by**

**James Hower, Director**

**University of Kentucky**

In addition to reviewing the brief reports from the eastern region projects, I consulted with Warren Dick about the potential for the use of an FGD gypsum/fly ash mix from a major Kentucky power plant. I am encouraged that CBRC-terminated projects are getting continued funding through the host organizations.

## **Appendix C**

**Midwestern Center Quarterly Report  
Submitted by  
Paul Chugh, Director  
Southern Illinois University, Carbondale**

**Combustion Byproducts Recycling Consortium (CBRC)**  
**Midwestern Regional Center**  
**Quarterly Progress Report July 1, 2007 – September 30, 2007**

**Submitted by**  
**Yoginder P. Chugh**  
**CBRC Midwestern Regional Center**  
**On 10/24/07**

**Task Description**

The Midwestern Regional Center (MRC) will perform two primary tasks:

1. Technical administration of CBRC projects in the Midwestern region, including
  - Participation in National CBRC steering meetings, conference calls, and other communications.
  - Facilitating communication within the region with the Regional Chair and Review Committees.
  - Facilitating the proposal submittal and review process.
  - Facilitating project activities and reporting and coordinating with the national CBRC office
2. Assist with financial administration of the research contracts awarded in the midwestern region.

**Accomplishments for the Period**

1. Worked with National Center to revise Midwestern Region projects and provide administrative support as needed.
2. Continued to provide support to local area industries on CCBs management for friction materials.
3. Provided support to a company in Chicago on management of bottom ash.

## **Status of Ongoing Projects**

- **CBRC M-9 “Environmental Performance Evaluation of Filling and Reclaiming A Surface Coal Mine with Coal Combustion Byproducts,” (Ish Murarka, ISH, Inc.)**

Revised final report has not been received.

- **05-CBRC- M09 “Cold In-Place Recycling of Asphalt Pavements Using Self-Cementing Fly Ash: Analysis of Pavement Performance and Structure Number” (Dr. Anil Misra, University of Missouri- Kansas City)**

Project is on hold.

- **05-CBRC-M16 “In Situ Stabilization of Gravel Roads with CCPs” (Dr. Tuncer Edil, University of Wisconsin, Madison)**

Project is on hold.

- **05-CBRC-M20 “New Technology Based Approach to Advance Higher Volume Fly ash Concrete with Acceptable Performance” ( Dr. K. Obla, National Aggregate Association)**

Project is on hold.

- **05-CBRC-M23 “Manufacturing Building Products with Fly Ash and Advanced Coal Combustion Byproducts ( Dr. Melissa Chou, Illinois State Geological Survey)**

Project is on hold.

## **Plans for the Next Quarter**

- Continue to provide technical and coordination support to different projects within the region.
- Continue to provide support to industrial groups in the region.

## **Appendix D**

**Western Center Quarterly Report  
Debra Pflughoeft-Hassett, Director  
University of North Dakota**

**No report received this quarter.**